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Astrology in the Middle Ages

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Abstract

The article reviews the history of astrology in the middle ages including its classical inheritance, ascendancy under Byzantium and Islam, and development in the Latin west. Mediaeval astrology was a part of learned, scientific culture. However, the translation movement in the high middle ages brought challenges of integration to the Latin west, reflected in condemnations and anxieties about the orthodoxy and morality of astrological judgements. It was not until relatively late that astrology was practised on a large scale in mediaeval courts and it never achieved the same level of prominence as it did under Islam. The final section considers new work on the history of astrology, including astrology and medicine and astrology and the court. The article considers major figures, including Claudius Ptolemaeus (Ptolemy), Isidore of Seville (c. 600 AD), Māshā'allāh (Messahallah) (c. 735–815), Abū Ma'shar (Albumasar), Ahmad ibn Yūsuf (870–904), John of Seville (fl. 1135–1153), Alfonso X (El Sabio) of Castile (1221–1284), Albertus Magnus (1206–1280), and the fifteenth-century astrologer historian, Simon de Phares. It is argued that astrology was an integral part of the mediaeval world view and it is impossible to understand mediaeval culture without taking it into account.

Astrology is traditionally said to have originated in Babylon in modern Iraq where there was a tradition of birth horoscopes which can be dated to the early fifth-century BC.[1] However, as a systematic body of knowledge rather than celestial omens, scientific (or 'Hellenic') astrology originated in Egypt in the second century BC. From there, it passed into mainstream Greek and Latin society and was subsequently incorporated into the three civilisations of the mediaeval world: Byzantium, Islam and the Latin west. Lynn Thorndike once called astronomy/astrology the supreme natural science of the mediaeval age – which is scarcely an exaggeration.[2] It permeated most aspects of mediaeval intellectual, cultural and political life, and it is not possible to enter sympathetically into mediaeval society without understanding it. The purpose of this essay is to provide some compass bearings for researchers beginning their journey in this rewarding and extensive field.

Classical Inheritance

Classical Babylonian, Greek and Roman traditions all contributed to mediaeval astrology. However, most of these influences came to the west via the multi-cultural Arabic-speaking world, something reflected in the terminology used for many astrological terms and concepts.

In the middle ages, astrology was always studied as part of the overall study of the heavenly bodies, which Arabic astrologers called the 'science of the stars' (*'ilm al-nujūm*).[3] This was commonly divided into the science of movements (*'ilm al-falak*) and the science of judgements of the stars (*'ilm ahkām an-nujūm*). This division was given particular authority by the most famous of all classical scientific writers, Claudius Ptolemaeus

(Ptolemy), who flourished in second-century Alexandria, the Egyptian city founded c. 331 BC by Alexander the Great. According to Ptolemy, there were two parts to the science of the stars: the first part considered the theory of the heavens, whereas the second part concerned its practical application to the world below.[4] Superficially this appears to correspond to the modern distinction between astronomy and astrology; however, there was no real semantic separation between the two terms in the middle ages and renaissance, and both words are used more or less interchangeably throughout the period.[5]

Ptolemy compiled what proved to be the most influential of classical treatises on astrology, the *Tetrabiblos*, known in Latin as the *Quadripartitum* because it was divided into four parts or books. For mediaeval readers, the chief virtue of this work was its systematic treatment of the subject as well as its effective presentation of scientific arguments in support of its contentions. Ptolemy was sceptical about the value of some parts of astrology, especially judicial questions or interrogations (a technique for guiding choices based on the state of the heavens at the time a question was posed). However, he gave strong support to the tenets of natal astrology, which is the interpretation of character, health and fortune based on the configuration of the heavens at the time of birth.

It was common to distinguish between licit and illicit, or natural and superstitious branches of the science of the stars. Natural astrology covered the astronomical, biological, medical, agricultural and nautical uses of the science. While it is tempting to equate this with the modern distinction between astronomy as a true science and astrology as a pseudo-science, this would be anachronistic. It was recognised that there was a licit form of astrology which involved celestial influences over natural processes. However, in modern terms, the assertion of astrological power over, for example, the birth and death of animals or the weather, was no more (or less) pseudo-scientific than that assumed to control individual fortunes or political events. Both involved the invocation of celestical influence, and both formed part of the science of the stars.

It is also anachronistic to assume that mediaeval belief in astrology was uncritical. There is no period in which astrology has not found both supporters and detractors on rational, theological and moral grounds.[6] For the mediaeval tradition, the most important source for intellectual arguments opposing astrology was Cicero's *De divinatione 2.47*. Augustine absorbed Cicero's examples but took them much further, rejecting many kinds of divination that Cicero had accepted as reflections of the divine will.[7] Christian theologians objected to the determinacy of astrological predictions; emperors outlawed divination which threatened their political security, and intellectuals continued to poke holes in the rationality and coherence of astrological theory and practice.[8]

Early Mediaeval Astrology

Knowledge of Greek scientific culture – of which astrology had formed an essential part – all but disappeared in the Latin west along with the Roman legions. By the time of Isidore of Seville (c. 600 AD), Ptolemy, the astronomer, was being confused with the Egyptian dynasty of the same name. This was to do Ptolemy's reputation no harm and may have been the beginning of a long association between astrology and royalty which continued into the renaissance. Early mediaeval Latin astrology lacked the mathematical and astronomical rigour which distinguished its classical precursors.[9] However, knowledge of the names and significance of the constellations, the planets, and the signs of the zodiac, their relationship to the seasons and the calculation of the liturgical year, underpinned Latin astrology in the early middle ages and was summarised in works such as the *Etymologies* of Isidore of Seville (c. 560–636) and the works of Bede (d. 735) on the com-

putus (the discipline which taught the method for calculating Easter).[10] Isidore himself did not approve astrology, as indicated by his definition of the distinction between astrology and astronomy:

> There is a certain distinction between astronomy and astrology. For astronomy concerns the turning of the heavens, the rising, setting and motion of the planets, or from what cause this can be defined. Astrology is partly a natural science and partly superstitious. The natural part explains the courses of the sun and the moon, or certain positions of the stars and of the seasons. The superstitious part is that which diviners follow, who make auguries from the stars, and also associate the twelve celestial signs with all parts of the body and soul, and attempt to predict the births and customs of people from the course of the stars.[11]

Isidore also stated that astronomy was first discovered by the Egyptians, whereas astrology and the observation of nativities were first taught by the Chaldaeans (the dynasty in southern Iraq who ruled Babylon from the sixth century BC). He condemned attempts to use astrology to predict the future as contrary to the faith. Valerie Flint has argued that the church rehabilitated astrology in the early middle ages, but it would be truer to say that it was never fully suppressed.[12] Celestial influence was accepted as a fundamental premise throughout the middle ages and provided the basis for most scientific speculation about the nature of the universe.[13] While interest in Roman astronomy revived, Bruce Eastwood has observed that Hellenic astrology formed no part of the Carolingian world.[14]

Arabic Astrology

While astrology declined in the Latin west, it ascended in Byzantium and the Islamic world. Under the rule of the Umayyad Caliphate, based in Damascus (660–750), there was extensive interchange between Islam and Hellenic culture and its load of neo-Platonism and Hermetic mysticism. Greek natural philosophy was used to provide additional scientific support for the reality of celestial influence. Other aspects of astrological theory and practice were drawn from pre-Islamic Arabic, as well as Indian, Jewish, Persian and other cultural sources.[15] The number of authorities, not all of whom were translated into Latin and could therefore become known in the west, is very extensive – sufficient to fill a volume in Sezgin's comprehensive survey of mediaeval writers in Arabic up to the middle of the eleventh century.[16]

Astrologers reached the apogee of their mediaeval influence in the courts of the Abbasid caliphate (758–1258). The city of Baghdad was founded on 30 July 762 by the second caliph al-Mansur (754–775) following the advice of his astrologers, including the Egyptian Jew Māshā'allāh (Messahallah) (c. 735–815). The seventh caliph, al-Ma'mūn (r. 813–833), founded the *Bayt al-Hikma* or House of Wisdom in Baghdad, which became a magnet for scholars from across the Muslim world who came there to read and translate texts, use the observatory, and study the science of the stars, philosophy, medicine and other related arts. Under generous patronage, astrologers, such as Abū Ma'shar (Albumasar) adapted classical Aristotelian theories of change, growth and decay in the natural world to provide a powerful validating philosophy for the theory of celestial influence.[17] Abū Ma'shar, a Persian from Balkh in what is now Afghanistan, was probably the most influential of all astrological authorities, writing over 40 works including major, authoritative accounts of all its major branches.[18] Commentaries were also important to the intellectual development of astrology. The most important of these was the commentary on Ptolemy's *Quadripartitum* with the pseudo-Ptolemaic *Centiloquium* and its commentary, all three of which were

probably written by the Egyptian astrologer, Ahmad ibn Yūsuf (870–904). As in the classical world, the morality and rationality of astrology were the subject of learned debate, with some thinkers and theologians rejecting it entirely, notably the Persian physician Ibn Sīnā (Avicenna, 980–1037) and the Iberian philosopher Ibn Rushd (Averroes), while others accepted all parts of astrology as compatible with the will of God.

Throughout the Islamic world, astrology was incorporated into a cohesive programme of intellectual inquiry which included astronomy, mathematics, music, medicine, alchemy, magic, philosophy, theology, literature, calligraphy and the arts. While scientific astrology was practised and debated by the cultural elite, astrology and other forms of divination such as geomancy, which incorporated aspects of astrological lore, were part of popular culture. At the highest levels of society, court patronage of astrologers and astrology extended well beyond the middle ages and into the modern day. Indeed, the position of chief astrologer in the courts of the Ottoman Turks, which is first noticed in the fifteenth century, continued until 1924.[19]

Latin Astrology

Astrology had a more limited role to play in the Latin west than it did under Islam.[20] Nevertheless, it holds a central place in Latin scientific literature.[21] Western knowledge of scientific astrology was affected both by the collapse of Greek learning and by the disapproval of Latin Church Fathers, including Augustine and Isidore of Seville, to which we have already referred. However, some forms of astrology survived quite well. The earliest Latin treatise on astrology which shows knowledge of the Arabic sources was the tenth-century *Alchandreana* which provided a method of making predictions which did not require knowledge of planetary positions.[22] This non-mathematical form of astrology, combined with calendrical, magical and medical material, continued to be popular at all levels of society throughout the middle ages.[23]

Latin translation and transmission of the sophisticated Arabic scientific corpus, including astrology, began in the tenth century with the journeys of Gerbert of Aurillac (later Pope Sylvester II, 999–1003), and continued until the thirteenth century.[24] The main sites for translation were the polyglot cities of Spain, especially Toledo,[25] and the Norman Kingdom of Sicily. In these places, newly conquered and (possibly) newly converted Arabic speakers, who included Muslims, Jews and Christians, collaborated with Latin specialists to produce translations for Christian episcopal and royal patrons. Major translators of astrological works included Adelard of Bath (d. c. 1142) who not only translated Abū Ma'shar's *Introduction to astrology*, but also the *zij*, or fully worked astronomical tables, by al-Khwarizmi, which were the foundation for scientific astrology based on the weighing of all the planetary positions. Others included Plato of Tivoli, who translated Ptolemy's *Quadripartitum*, Gerard of Cremona (c. 1114–1187), and John of Seville (fl. 1135–1153),[26] who was responsible for the largest number of astrological translations, including many works by Abū Ma'shar and Māshā'allāh. Hugh of Santalla translated works of astrology, astronomy and magic for his patron, Michael, bishop of Tarazona from 1119 to 1151.[27] He may have had access to the library in Saragossa which had fallen to the Christian reconquest.

The reception of this new body of scientific astrology in the Latin west in the twelfth and thirteenth centuries has been extensively studied. Following the pioneering surveys of Duhem and Sarton,[28] Haskins argued that the cultural transformation which he called the '12th century Renaissance' was to some extent the product of the translation movement, especially the response to classical Greek and Arabic works of natural philosophy

and science.[29] Haskins's innovative thesis was supported through the labours of Lynn Thorndike. [30] Although it was first developed as a polemical argument, Thorndike's insistence on the central place of magic and astrology in mediaeval cultural history, which was based on his heroic survey of the range and depth of the manuscript evidence, has now been quietly accepted as the new orthodoxy by contemporary scholars.[31]

Critical to the absorption of astrological ideas by European society as a whole, instead of just a mobile clerical elite, was translation into the vernacular. One figure stands out as the patron of this movement. Alfonso X (El Sabio) of Castile (1221–1284) was not a very successful king, but he was the most significant scientific patron of the middle ages, and the one who comes closest to the Abbasids on whom he may have modelled himself. As a wise prince, Alfonso supported the translation of works of astrology, astronomy, and the sciences into the vernacular of his own realm, Castilian. The *Libros del saber de astronomia* consists of 15 treatises concerning the making of astronomical instruments and other matters essential to astrology. He also gave support to a revision of the Toledan Tables of al–Zargālī (Arzachel, *ca.* 1029–*ca.* 1087).[32] This became celebrated in the Latin form of the tables which were prepared in Paris and were known as the Alfonsine Tables, although there is some dispute about their relationship to the Castilian originals. These became distributed all over Europe.[33] Altogether, Alfonso created a corpus of knowledge which defined his reign not just in time and space but also linguistically. According to Evelyn Proctor, the prologues to the many astronomical, magical and astrological works that he commissioned, translated and wrote show that Alfonso was far more than a patron. [34] He was a scholar and intellectual who appreciated and used the texts, instruments and images that he commissioned for his people. Elsewhere in Europe translations proceeded into the other major vernacular languages, usually by way of Latin. However, there was no equivalent to the systematic translation movement into either Arabic or Latin in any European vernacular.

It took some time before access to the new translations could transform Latin astrology from the intellectual passion of scholarly elite into a client-based professional practice. However, in the thirteenth century, the translators began to include a number of individuals who aspired not just to create new Latin texts, but also to build a reputation which they could use to acquire patrons for whom they could provide astrological judgements. This was also true of some of the early translators, such as Adelard of Bath, who may have provided horoscopes relevant to his former student, Henry II of England.[35] However, these scholar practitioners were now joined by larger numbers of what was in effect a new professional class – the court astrologer. The most significant of these was Michael Scot (1175–c. 1232), who worked in Toledo, lectured in Bologna and eventually joined the service of the Emperor Frederick II. [36] The career path of the professional astrologer could be frought with personal and political danger. At the end of his long life, the Italian Pietro d'Abano (c. 1250–c. 1316), the physician, astrologer and lecturer in medicine at the University of Padua, was condemned to death by the Inquisition (though not actually executed) and became the first scientific martyr of the middle ages.

The astrology which came into western Europe in the high middle ages was dominated by Greek, Arabic and Hebrew authorities, which together provided a comprehensive theory and interpretation of the heavens and their influence on the world below. As reflected in critical digests of the field, such as the *Speculum astronomie*, usually attributed to Albertus Magnus (1206–1280),[37] the science of the stars could be divided into four or five branches. Beginning with 'introductions', which concerned fundamentals, such as the nature of the signs and the planets, the other branches were nativities, revolutions, elections and interrogations. Nativities assessed the imprint on the newborn of the celestial

bodies at the time of birth. Revolutions considered the state of the heavens at the birthday of the New Year – the entry of the sun in the first degree of Aries – and provided annual predictions on the weather, politics, agricultural conditions, prices and the outlook for disease and epidemics. It also included historical astrology, based on the conjunctions of the major planets. This was good for predicting the rise and fall of dynasties and religions and long-term events. Elections provided a means to determine the most auspicious times for events, such as weddings and coronations, but could consider quite mundane matters, such as when to have a haircut, take medicine or visit someone in prison. Interrogations were a type of augury and involved meditating on a question posed by a client, casting a horoscope for the time the question was put, and providing solutions to the whereabouts of hidden objects, absent friends, the outcome of a pregnancy and other matters. Sometimes this list was extended to include medical astrology and the more suspect arts, such as nigromancy or image magic as represented in *Picatrix* (another of the Arabic works which formed part of the Alfonsine corpus).[38] However, these were the main forms of astrology known in the west.

Even without the inclusion of nigromancy, the absorption of so much new and heterodox material did not occur entirely without cultural conflict. From the middle of the thirteenth century, there are signs of increasing anxiety about the moral standing of astrological predictions and the troubling relationship between Aristotelian science and Christian theology. The most important reflection of this is the condemnation of a range of propositions, including astrological theories such as the *Annus Platonicus* or Great Year,[39] at the Universities of Paris and Oxford in the 1270s. Astrology was readily absorbed into speculative chronologies of the coming of Antichrist which prevailed at the end of the thirteenth century, attracting major thinkers including the Franciscan Roger Bacon (1214/1220–1292). By the 1270s, the strain of determining which texts should receive approval for study and practice, and which should be condemned, was so acute that the pope asked the great Dominican scholar, Albertus Magnus (c. 1200–1280), to prepare an authoritative survey and catalogue of all the books on astronomy, astrology and the related sciences, determining which were licit and which were not.[40] The need for a works such as the *Speculum astronomie* is one of the best indications of the important position that astrology had managed to achieve since the translation era began.

Throughout the thirteenth century, astrology was generally studied in association with medicine. In both southern and northern Europe, the *studia* of major cities employed astrologers to provide annual predictions, deliver lectures on the *quadrivium* and provide training for physicians in the astrology essential to medical practice. Astrologers trained in this way were also drawn into service at court, sometimes to their own advantage, sometimes disastrously. The Franciscan, Guido Bonatti of Forlì (d. between 1296 and 1300), who lectured at the University of Bologna, and became established as the best known astrologer of his day, wrote a major textbook in ten books which covered all branches of astrology.[41] In Dante's estimation, this earned him a place in hell along with Michael Scott (1175–1232?).[42] Another textbook was written by Bonatti's contemporary, the rather shadowy Leopold of Austria (fl. 1271), who was probably also attached to a northern university.[43] The increasing diffusion of astrological learning and imagery is also reflected in the incorporation of the signs of the zodiac into ecclesiastical and civic architecture and manuscript illumination, especially calendars.[44] For art historians including Aby Warburg and Jean Seznec,[45] astrology was critical to the re-animation of the visual mythology of antiquity which underpinned the 'rebirth' of classical learning.

The fourteenth century is important in the history of astrology because it is in this period that we have increasing evidence that astrologers, and astrologically trained physicians,

were entering courtly service.[46] The evidence for this includes the appearance of horoscopes calculated for individuals, such as the collection of nativities for members of his family which form part of a manuscript prepared for Charles V of France (1337–1380).[47] Of all later mediaeval kings, Charles V came closest to emulating the programme of Alfonso el Sabio, commissioning the translation of works of astrology and astronomy into the vernacular, cultivating the works of learned men, of whom Nicole Oresme (1323–1382) is the most distinguished, and establishing a library and college of astrology and medicine at the University of Paris. Nevertheless, there was a major difference in that Nichole Oresme was opposed to astrology and wrote a treatise – in both French and Latin – in which he expressed his reasons for doing so.[48] Politics begins to impinge on the cultivated relationship of astrologer and patron in the course of the fourteenth century. Astrology became implicated in a number of messy trials for sorcery in England and at the papal court, and this may have led to a distancing of some regimes from individual predictions. Astrology also has a disquieting influence on calculations of the end of the world.[49]

The real flowering of astrology in western Europe happened in the fifteenth century as part of the northern and Italian renaissance. Reconciliation between Christianity and astrology, or between the natural sciences and theology, was attempted by key thinkers, especially Pierre d'Ailly.[50] There is a wealth of sources which demonstrate the extent of private practice, including the catalogue of astrologers compiled by the astrologer Simon de Phares at the time of his own trial.[51] While, as Jean-Patrice Boudet has demonstrated, the majority of the astrologers claimed for his catalogue by Phares were fabrications, they nevertheless testify to a new society in which the astrologer had more opportunities for patronage and fame than he had at any time since the founding of the Baghdad House of Wisdom.

The practice of scientific astrology, as mediaeval authorities recognised, required mastery of astronomy and mathematics in addition to high levels of literacy in various learned languages, including Arabic, Greek and Latin. By the end of the middle ages, however, these technical burdens were considerably lightened by the production of high-quality printed calendars, astronomical tables and instruments which reduced the burden of calculation and opened the practice of judicial astrology up to everyone. Those who wish to reproduce the steps taken by mediaeval astrologers in calculating a horoscope should consult studies by John North,[52] as well as the historical ephemeris by Tuckerman to check calculations.[53] Hartner's step-by-step account of how to interpret a horoscope remains useful,[54] as does that by Eade for readers of renaissance literature.[55] Computer software and online websites provide short cuts (although my personal experience is that few provide useful results for historical horoscopes).[56] For interpretation of data, there is no substitute for consulting mediaeval textbooks of which the *Introduction* by Alcabitius,[57] and the encyclopaedias by Bonatti and Haly Abenragel (both available in online digitial facsimiles of early editions) can be recommended.[58]

Research in the history of western astrology has rapidly expanded over the last 20 years. Several scholars have been instrumental in this. In the first place, Charles Burnett at the Warburg Institute and his collaborators have now published many scholarly editions of the key texts of Arabic, Latin, Greek and Hebrew astrology which must form the base for any understanding of the tradition.[59] At the same time, researchers interested in a range of themes have increased our appreciation of astrology's importance for mediaeval science and medicine, politics and court culture. Secondly, there have now appeared a number of major, synthetic studies which seek to place astrology within the history of its age. Richard Kiekhefer has led the way here,[60] but there are fewer specialist

surveys of astrology.[61] In this respect, perhaps the most important work to have been published since Thorndike's multi-volume history is Jean-Patrice Boudet's learned history of astrology and magic, which appeared in 2006.[62] Other than works intended for a popular readership, such as Peter Whitfield's general history which he undertook for the British Library, it is surprising that there have been so few satisfactory general histories of astrology.[63] Boudet has now filled a major need.

Other developing themes include the study of astrology in its relation to medicine on the one hand and magic on the other. While astrology was esteemed by physicians, it is becoming clear from the work of Cornelius O'Boyle and others,[64] that medicine was not overwhelmed by astrological theory. Astrological medicine, as represented in William English's *De urina non visa*, was more of an independent study than a partner to medicine.[65] Nevertheless, the clerical physician who had been trained in astrology was an important conduit to the creation of a secular market for more sophisticated astrological services.[66] As courtiers, astrologer-physicians were key figures in the intimate and dangerous court politics of the early renaissance, as Monica Azzollini has demonstrated in the case of the Sforza of Milan.[67] Another important emerging field concerns the study of astrology in the context of particular courts. Because of the richness of the sources, the best of this work has tended to relate to the fifteenth century rather than the earlier middle ages. However, thanks to Jan Veenstra, we now know considerably more about astrology at the court of Burgundy,[68] and it is hoped more scholars will undertake local studies elsewhere in Europe.

Conclusion

This is a review essay and it is intended to provide an entry into the study of mediaeval astrology by those who have no previous knowledge of the subject. There are challenges to working in this field. In the first place, like all mediaeval disciplines, astrology has its own technical literature and language which must be mastered to progress in understanding. In addition, astrology suffers from the peculiar impediment that, unlike almost all other branches of mediaeval learning, astrology continues to claim adherents and detractors in contemporary western and Islamic society. Bizarrely, this means that a discipline which was sometimes conceived in the middle ages as the most scientific, deterministic and materialistic of the natural sciences has now come to represent something very like its opposite. So do intellectual fashions change. The bibliography attached includes more leads for those who want to understand this ancient, varied and rich tradition more completely.

Short Biography

Hilary M. Carey is a Professor of History at the University of Newcastle, NSW. She is the author of *Courting Disaster: Astrology at the English Court and University in the Later Middle* Ages (Macmillan, 1991), *Empires of Religion*, ed. (Palgrave, 2008), and a forthcoming history of religion and colonialism for Cambridge University Press, *God's Empire*. Her research covers late mediaeval and nineteenth-century cultural and religious history, including mediaeval and early Renaissance astrology, the mediaeval calendar, colonial missions, scripture translation and mediaevalism. Her most recent mediaeval research concerns the role of astrology in medicine, including the astrological medicine reflected in William English's *De urina non visa*, and the astrology of the Tudor Renaissance.

Notes

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